

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1. (Currently Amended) A method of encoding video content, the method comprising:  
segmenting the video content into video content portions;  
assigning a predefined model to each of at least two video content ~~portion~~ portions of  
the video content; and  
routing each of the at least two video content ~~portion~~ portions to one of a plurality of  
encoders based on a respective one of the model associated with predefined models assigned  
to each of the at least two video content ~~portion~~ portions, wherein  
the assigning a predefined model to each of the at least two video content portions  
further comprises:  
comparing descriptors associated with each of the at least two video content  
portions with corresponding stored model descriptors from a plurality of predefined  
content models, and  
assigning each of the at least two video content portions to a respective best  
content model from the plurality of predefined content models based on the  
comparing of the descriptors.
2. (Currently Amended) The method of claim 1, wherein the at least two video content  
portions are video segments.
3. (Currently Amended) The method of claim 1, wherein the at least two video content  
portions are video subsegments.

4. (Currently Amended) The method of claim 1, wherein the at least two video content portions are video regions of interest.

5. (Original) The method of claim 1, wherein the plurality of encoders includes a generic model encoder.

6. (Canceled)

7. (Currently Amended) The method of claim [[6]] 1, wherein one of the plurality of predefined ~~video~~ content models includes a generic video content model.

8. (Currently Amended) The method of claim 7, wherein assigning a predefined model to each of at least two video content ~~portion~~ portions of the video content further comprises assigning the generic video content model to a video content portion of the at least two video content portions if none of the other models from the plurality of predefined ~~video~~ content models is assigned to the video content portion.

9. (Currently Amended) A method of encoding video content, the method comprising:  
~~extracting video portions from video content;~~  
identifying video subsegments and regions of interest within ~~the~~ at least two video portions from the video content;

assigning a predefined encoder model to each of the at least two video ~~portion~~ portions according to a characteristic of each of the at least two video ~~portion~~ portions, the predefined encoder model being chosen from a plurality of predefined encoder models or a generic encoder model;

encoding each of the at least two video portions associated with the generic encoder model with a generic encoder; and

encoding each of the at least two video portions associated with the plurality of predefined encoder models with an encoder chosen from a plurality of encoders, each of the plurality of encoders being associated with one of the plurality of predefined encoder models, wherein

the assigning a predefined encoder model to each of the at least two video portions according to a characteristic of each of the at least two video portions further comprises:

comparing first descriptors associated with the at least two video portions and second descriptors associated with the video subsegments and the regions of interest with corresponding stored model descriptors from a plurality of predefined content models, and

assigning each of the at least two video content portions to a respective best content model from the plurality of predefined content models based on the comparing of the first and the second descriptors.

10. (Currently Amended) The method of claim 9, further comprising:

producing the first descriptors associated with the at least two video portions of the video content; and

producing the second descriptors associated with the video subsegments and the regions of interest.

11. (Currently Amended) The method of claim 10, further comprising:

encoding the first and the second descriptors ~~associated with the video portions, video subsegments and regions of interest.~~

12. (Currently Amended) The method of claim 11, wherein the first and the second descriptors ~~associated with the video portions, subsegments and regions of interest~~ are used to determine whether a generic encoder or an encoder from the plurality of encoders was used to encode the at least two video content ~~content~~ portions.

13. (Currently Amended) A method of encoding video content, the method comprising:  
~~segmenting the video content into video content portions;~~

if a video ~~content~~ portion of at least two video portions of the video content relates to one of a plurality of predefined encoder models, assigning the video content portion to a related, predefined encoder model chosen from the plurality of predefined encoder models;

if a video content portion of the at least two video content portions of the video content does not relate to one of the plurality of predefined encoder models, assigning the video content portion to a generic encoder model;

encoding each of the at least two video content portions associated with the generic encoder model using a generic encoder; and

encoding each of the at least two video content portions associated with one of the predefined encoder models with an encoder from a plurality of encoders, wherein.

the assigning the video content portion to a related, predefined encoder model chosen from the plurality of predefined encoder models further comprises:

comparing descriptors associated with the video content portion with corresponding stored model descriptors from a plurality of predefined encoder models, and

assigning the video content portion to a best encoder model from the plurality of predefined encoder models based on the comparing of the descriptors.

14. (Previously Presented) The method of claim 13, wherein each encoder from the plurality of encoders is associated with one of the predefined encoder models of the plurality of predefined encoder models.

15. (Currently Amended) A method of encoding video content divided into a ~~plurality of at least two~~ portions, each ~~portion of the at least two portions~~ being associated with either a generic encoder model or an encoder model chosen from a plurality of predefined encoder models, the method comprising:

comparing descriptors associated with the at least two portions with corresponding stored model descriptors from a plurality of predefined encoder models;

assigning each of the at least two portions to a respective best encoder model from the plurality of predefined encoder models based on the comparing of the descriptors;

routing each ~~portion of the at least two portions that is not assigned a respective best encoder model from the plurality of encoder models associated with the generic encoder model~~ to a generic encoder; and

routing each ~~of the at least two portions~~ ~~portion~~ assigned to the respective best ~~associated with an~~ encoder model of the plurality of predefined encoder models to an encoder associated with the respective best ~~chosen~~ encoder model.

16. (Previously Presented) The method of claim 15, wherein each encoder from the plurality of encoders is optimized for each predefined encoder model of the plurality of encoder models.

17. (Canceled)

18. (Currently Amended) A method of producing a bitstream coded according to video content, the method comprising:

~~extracting a plurality of portions from the video content;~~

associating each of at least two portions of the video content ~~portion of the plurality of portions~~ to either a generic encoder model or a predefined encoder model chosen from a plurality of predefined encoder models;

routing each of the at least two portions ~~portion~~ associated with [[a]] the generic encoder model to a generic encoder; and

routing each of the at least two portions ~~portion~~ associated with an encoder model of the plurality of predefined encoder models to one of a plurality of encoders, wherein each encoder of the plurality of encoders is associated with one of the predefined encoder models, wherein

the associating each of the at least two portions of the video content to either a generic encoder model or a predefined encoder model chosen from a plurality of predefined encoder models further comprises

comparing descriptors associated with each of the at least two portions with corresponding stored model descriptors from the plurality of predefined encoder models, and

associating each of the at least two portions with a respective best encoder model from the plurality of predefined encoder models or the generic encoder model based on the comparing of the descriptors.

19. (Original) The method of claim 18, further comprising:  
multiplexing each portion and transmitting each portion in a bitstream.

20. (Original) The method of claim 18, further comprising:

locating subsegments and regions of interest in the extracted portions.

21. (Currently Amended) A method of encoding a bitstream using a plurality of encoders, the method comprising:

~~extracting segments from video content;~~

mapping each of at least two segments extracted ~~segment~~ from the video content to a predefined encoder model; and

routing the at least two extracted and mapped segments to one of the plurality of encoders based on the mapping to the respective predefined encoder model, wherein

the mapping each of at least two segments extracted from the video content to a predefined encoder model further comprises:

comparing descriptors associated with each of the at least two extracted segments with corresponding stored model descriptors from the plurality of predefined encoder models, and

mapping each of the at least two extracted segments to a respective best encoder model from the plurality of predefined encoder models based on the comparing.

22. (Currently Amended) The method of encoding of claim 21, further comprising:

~~after extracting the segments from the video content,~~ locating subsegments and regions of interest in the at least two extracted segments.

23-26. (Canceled)

27. (Previously Presented) A coded bitstream having portions of the bitstream encoded using different encoders according to encoder models associated with a subject matter of each portion of the bitstream, the coded bitstream encoded according to the method of claim 1.
28. (Previously Presented) A coded bitstream having portions of the bitstream encoded using different encoders according to encoder models associated with a subject matter of each portion of the bitstream, the coded bitstream encoded according to the method of claim 18.
29. (Previously Presented) A coded bitstream having portions of the bitstream encoded using different encoders according to encoder models associated with a subject matter of each portion of the bitstream, the coded bitstream encoded according to the method of claim 21.
30. (New) The method of claim 1, wherein the assigning a predefined model to each of at least two video content portions of the video content further comprises assigning a different predefined model to each of the at least two video content portions of the video content.
31. (New) The method of claim 9, wherein the assigning a predefined encoder model to each of the at least two video portions according to a characteristic of each of the at least two video further comprises assigning a different predefined encoder model to each of the at least two video portions of the video content.
32. (New) The method of claim 13, wherein the assigning the video content portion to a related, predefined encoder model chosen from the plurality of predefined encoder models further comprises assigning each of the at least two video content portions of the video content to a different one of the predefined encoder models.



33. (New) The method of claim 15, wherein the assigning each of the at least two portions to a respective best encoder model from the plurality of predefined encoder models based on the comparing of the descriptors further comprises assigning each of the at least two portions to a different one of the plurality of predefined encoder models.
34. (New) The method of claim 18, wherein the associating each of the at least two portions of the video content to either a generic encoder model or a predefined encoder model further comprises associating each of the at least two portions of the video content to a different encoder model chosen from the generic encoder model or the plurality of predefined encoder models.
35. (New) The method of claim 21, wherein the mapping each of at least two segments extracted from the video content to a predefined encoder model further comprises mapping each of the at least two segments to a different predefined encoder model.